



Marius M. Bălaș

Lista lucrărilor (31.12.2025) **List of works**

a) Teza de doctorat – Doctoral thesis

a1) *Regulatoare fuzzy interpolative adaptive și aplicații în construcția vagoanelor de călători. (Adaptive interpolative fuzzy controllers and applications in passenger railway coach construction)*. Conducător științific Prof.dr.ing. Mircea A. Ciugudean. Susținută în 7.12.2001 la Univ. Politehnica din Timișoara.

a2) *Sisteme fuzzy-interpolative cu aplicații în automatică. (Fuzzy-interpolative systems with applications in automatics)*. Susținută la Univ. Petrol și Gaze din Ploiești în luna iulie 2020. Atestatul de abilitare a fost eliberat în baza Ordinului Ministerului Educației și Cercetării nr. 6327 din 22.12.2020.

b) Cursuri și îndrumătoare de lucrări - University courses

b1) M.M. Bălaș, V.E. Bălaș. *Dispozitive și circuite electronice – îndrumător de lucrări de laborator*. Editura Universității “Aurel Vlaicu” Arad, 2000, ISBN 973-9361-38-2.

b2) M.M. Bălaș, V.E. Bălaș. *Dispozitive și circuite electronice – îndrumător de lucrări de laborator*. Editura Universității “Aurel Vlaicu” Arad, 2000, ISBN 973-9361-38-2.

b3) M.M. Bălaș, V.E. Bălaș. *Curs de dispozitive electronice*. Editura Universității “Aurel Vlaicu” Arad, 2003, ISBN 973-9361-83-8.

c) Cărți - Books

c1) M.M. Bălaș. *Regulatoare fuzzy-interpolative*. Editura Politehnica Timișoara, 2002. ISBN 973-625-036-9. **Author.**

c2) M.M. Bălaș, *Introducere în electronica. Circuite electronice liniare*. Editura Universității “Aurel Vlaicu” din Arad, 200 pagini. 2013. ISBN 978-973-752-673-1. **Author.**

c3) *Soft Computing Applications: Proceedings of the 7th International Workshop Soft Computing Applications* (SOFA 2016), Vol. 1&2. Editors: Valentina Emilia Balas, Lakhmi C. Jain, Marius Mircea Balas. Part of the book series: *Advances in Intelligent Systems and Computing* (AISC, volume 633) edited by Janusz Kacprzyk. ISSN: 2194-5357, eISSN: 2194-5365. **Editor.**

c4) *Internet of Everything and Big Data: Major Challenges in Smart Cities*. Editors: S Krit, M Elhoseny, VE Balas, R Benlamri, MM Balas – CRC Press, 25 July 2021, 158 pages. Taylor & Francis Group. Published: 16 November 2022, eBook ISBN: 9781003038412, DOI: 10.1201/9781003038412. **Editor.**

c5) *Smart and Sustainable Technology for Resilient Cities and Communities. Advances in Sustainability Science and Technology*. Editors: Howlett R.J., Jain L.C., Littlewood J.R., Balas M.M. 321 pages. Springer, Singapore. Published: 2022. ISBN: 978-981-16-9100-3, eISBN: 978-981-16-9101-0, DOI: 10.1007/978-981-16-9101-0. **Editor.**

c6) *Intelligente und nachhaltige Technologie für widerstandsfähige Städte und Gemeinden*. Editors: Robert J. Howlett, Lakhmi C. Jain, John R. Littlewood, Marius M. Balas, Springer Vieweg Singapore, 351 pages, <https://doi.org/10.1007/978-981-97-9034-0>, Hardcover ISBN 978-981-97-9033-3, Published: 30 Jan. 2025, eBook ISBN 978-981-97-9034-0, Published: 29 January 2025. **Editor.**

c7) *Proceedings of International Conference on Wireless Communication*. Editors: Zoran Gajic, Hari Vasudevan, Amit A. Deshmukh, Valentina Emilia Balas, Marius M. Balas, Springer Singapore, 334 pag., <https://doi.org/10.1007/978-981-95-3616-0>, Hardcover ISBN 978-981-95-3615-3, eBook ISBN 978-981-95-3616-0 Published: 29 October 2025, Published: 30 October 2025. **Editor.**

d) Capitoile de carte – Book chapters

- d1) V.E. Balas, M.M. Balas. *Traffic Management by Constant Time to Collision*. Chapter in *Knowledge-Based Intelligent Information and Engineering Systems*, Edited by I. Lovrek, R. Howlett and L. Jain, *Lecture Notes in Computer Science*, Springer-Verlag Berlin/Heidelberg, 2008, Vol. 5179, pp. 658-663. ISBN 978-3-540-85566-8. **DPLB** (Computer Science Bibliography), **ACM**, **Scopus** (ARC Cat. B).
- d2) M.M. Balas, V.E. Balas. *World Knowledge for Controllers by Fuzzy-Interpolative Systems*. Eds. L.A. Zadeh, D. Tufis, F.G. Filip, I. Dzitac, in *Natural Language to Soft Computing: New Paradigms in Artificial Intelligence*, Editing House of Romanian Academy, 2008, pp. 11-21. ISBN 978-973-27-1678-6.
- d3) V.E. Balas, M.M. Balas. *A Survey on the Constant Time to Collision Techniques*. Eds. L.A. Zadeh, D. Tufis, F.G. Filip, I. Dzitac, *From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence*, Editing House of Romanian Academy, 2008, pp. 23-31. ISBN 978-973-27-1678-6.
- d4) M.M. Balas, V.E. Balas. *Postmodernism and Control Engineering*. Chapter 18 in *Views on Fuzzy Sets and Systems from Different Perspective. Philosophy, Logic, Criticism and Applications*. Edited by R. Seising, Springer Berlin/Heidelberg, 2009, Vol. 243, pp. 377-391. ISBN 978-3-540-93801-9. **DPLB** (Computer Science Bibliography).
- d5) M.M. Balas. *The Fuzzy Interpolative Methodology*. Chapter in *Studies in Computational Intelligence. Soft Computing Based Modeling in Intelligent Systems*, edited by V.E. Balas, A. Varkonyi-Koczy and J. Fodor, Springer-Verlag, 2009, Vol. 196, pp. 145-167. ISBN 978-3-642-00447-6, eISBN 978-3-642-00448-3.
- d6) M.M. Balas and V.E. Balas. *The Fuzzy Interpolative Control for Passive Greenhouses*. 5th European Conference on Intelligent Systems and Technologies. Chapter 12 in *Intelligent Systems and Technologies: Methods and Applications* edited by H.N. Teodorescu, J. Watada, and L.C. Jain, Springer-Verlag, 2009, Vol. 217, pp. 219-231. ISBN: 978-3-642-01884-8, eISBN: 978-3-642-01885-5, WOS:000268638100012. **DPLB** (Computer Science Bibliography).
- d7) M.M. Balas and V.E. Balas. *Adaptive Rule-Based Reasoning by Qualitative Analysis*, Chapter in *Proc. of 13th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. Theory and Methods*, edited by E. Hullermeier, R. Kruse and F. Hoffman, Springer-Verlag, 2010, pp. 553-560. ISBN 978-3-642-14054-9, eISBN 978-3-642-14055-6.
- d8) M.M. Balas, C. Musca and S. Musca. *The Passive Greenhouses*, Chapter 5 in *Paths to Sustainable Energy*, edited by J. Nathwani and A. Ng, InTech Open, 2010, pp. 75-92. <http://www.intech-open.com/books/paths-to-sustainable-energy/the-passive-greenhouses>. ISBN 978-953-307-401-6.
- d9) V.E. Balas and M.M. Balas. *Fuzzy Systems towards Field Applications*, Chapter 3 *On Fuzziness. A Homage to Lotfi A. Zadeh*, edited by R. Seising, E. Trillas, C. Moraga and S. Termini, Springer Verlag, 2012, Vol. 216, Chapter 25, pp. 189-195. ISBN: 978-3-642-35640-7, eISBN 978-3-642-35641-4.
- d10) M.A. Ciugudean and M.M. Balas. *CMOS-Integrated Temperature Relay Based on Widlar Mirror*. Chapter in *Proceedings of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, August 22-24. Series: *Advances in Intelligent and Soft Computing*. Eds. V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi, L.C. Jain, Springer, 2013, pp. 319-330. ISBN 978-3-642-33941-7.
- d11) M.M. Balas, M. Socaci, O. Olaru. *A FPGA Floating Point Interpolator*. Chapter in *Proceedings of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, August 22-24. Series: *Advances in Intelligent and Soft Computing*, edited by V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L.C. Jain, Springer, 2013, pp. 331-336. ISBN 978-3-642-33941-7.
- d12) M.M. Balas, N.A. Chira, S.A. Matisan and F.M. Suciu. *Using License Plates Recognition for Automate Cruise Control*. Chapter in *Proc. of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, August 22-24. Series: *Advances in Intelligent and Soft Computing*, edited by V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L.C. Jain, Springer, 2013, pp. 605-609. ISBN 978-3-642-33941-7.

d13) M.M. Balas. *A New Generation of Biomedical Equipment Based on FPGA. Arguments and Facts*. Chapter in *Advanced Intelligent Computational Technologies and Decision Support Systems. Studies in Computational Intelligence*, edited by B. Iantovics and R. Kountchev, Springer, 2014, Vol. 486, pp. 123-134. ISBN 978-3-319-00466-2, eISBN 978-3-319-00467-9.

d14) M.M. Balas, V.E. Balas, R. Lile, S.V. Balas. *Fuzzy-Interpolative Control for Intelligent Roof-Top Greenhouse Buildings*. Studies in Fuzziness and Soft Computing. Springer, Vol. 393, pp. 567-576. Published: 2021. ISSN: 14349922, DOI: 10.1007/978-3-030-47124-8_46. Book Chapter.

e) Articole de jurnal indexate ISI – ISI indexed journal papers

e1) M. Balas, J. Duplaix, M. Bouchouicha, S.V. Balas. *Structural modeling of the wind's influence over the heat flow of the greenhouses*. Presented at the *1st IEEE International Workshop on Soft Computing Applications, Aug. 27-30, Arad (SOFA'05)* Published in *Journal of Intelligent and Fuzzy Systems*, John Wiley & Sons, Special Issue: *Soft Computing and Applications*, Volume 19, Number 1, 2008, pp. 29-40. ISSN 1064-1246. WOS:000253944000005. IF₂₀₂₁: 1.737, Q4.

e2) M.M. Balas. *Seven Passive Greenhouse Synergies*. Acta Politehnica Hungarica, Budapest, Vol. 11, No. 4, 2014, pp. 199-210. ISSN: 1785-8860, WOS:000336555700013. IF₂₀₂₁ = 1.711, Q1.

e3) S. Chakraborty, N. Dey, S. Samanta, A., S. Ashour, C. Barna, M.M. Balas. *Optimization of non-rigid Demons registration using cuckoo search algorithm*. Cognitive Computation, Vol. 9, Issue 6, pp. 817-826, Springer US, Published: Dec. 2017. ISSN: 1866-9956, eISSN: 1866-9964, WOS:000417682600007, DOI: 10.1007/s12559-017-9508-y. IF₂₀₂₁: 3.444, Q1.

e4) Venkataraman Yegnanarayanan, Gayathri Yegnanarayanan, Marius M Balas. *On Coloring Catalan Number Distance Graphs and Interference Graphs. Symmetry-Basel*. Vol. 10, Issue 10, Article Number: 468, 13 pag., Published: Oct. 2018. ISSN: 2073-8994, WOS:000448561000048, DOI: 10.3390/sym10100468, IF₂₀₂₁: 2.94, Q1.

e5) U. Farooq, J. Gu, M. El-Hawary, V.E. Balas, M.M. Balas, G. Abbas, M.U. Asad, J. Luo, *State Convergence-based Control of a Multi-Master-Single-Slave Non-linear Teleoperation System*. Acta Polytechnica Hungarica Vol. 15, No. 4, pp. 7–26, Published: 2018, ISSN: 1785-8860, WOS:000442389300001, DOI: 10.12700/APH.15.4.2018.4.1, IF₂₀₂₁ = 1.711, Q1.

e6) Mahmood Hosseini Imani, Mojtaba Jabbari Ghadi, Shahaboddin Shamshirband, Marius M Balas. *Impact Evaluation of Electric Vehicle Parking on Solving Security-Constrained Unit Commitment Problem*. Mathematical and Computational Applications. Vol. 23, Issue 1, Article Number: 13, 16 pag., Published: Mar. 2018. ISSN: 1300-686X, eISSN: 2297-8747, WOS:000483104800012, DOI: 10.3390/mca23010013, IF₂₀₂₁ = 0.7, Q2.

e7) Ghulam Abbas, Jason Gu, Umar Farooq, Muhammad Abid, Ali Raza, Muhammad Asad, Valentina Balas, Marius Balas. *Optimized Digital Controllers for Switching-Mode DC-DC Step-Down Converter*. Electronics, Vol. 7, Issue 12, Article Number: 412, 25 pag., Published: Dec. 2018. eISSN: 2079-9292, WOS:000455067800071, DOI:10.3390/electronics7120412, IF₂₀₂₁ = 2.69, Q2.

e8) Farooq Umar, Gu Jason, Balas Valentina E., Abbas Ghulam, Asad Muhammad Usman, Balas Marius M. *A Hybrid Time Series Forecasting Model for Disturbance Storm Time Index using a Competitive Brain Emotional Neural Network and Neo-Fuzzy Neurons*. Acta Polytechnica Hungarica, Volume 16, Issue 4, pp. 213-229, Published: 1 April, 2019, ISSN: 1785-8860, WOS:000476902300011, DOI: 10.12700/APH.16.4.2019.4.11. IF₂₀₂₀ = 1.286, Q3.

e9) Ashraf Naveed, Izhar Tahir, Abbas Ghulam, Balas Valentina E., Balas, Marius M., Lin Tsung-Chih, Asad Muhammad Usman, Farooq Umar, Gu Jason. *A Single-Phase Buck and Boost AC-to-AC Converter with Bipolar Voltage Gain: Analysis, Design, and Implementation*. Energies. Volume 12, Issue 7, Article Number: 1376, pp. 1-17, Published: 1 April 2019, eISSN: 1996-1073, WOS:000465561400193, DOI: 10.3390/en12071376. IF₂₀₂₁ = 3.252, Q3.

e10) Abbas Ghulam Nazeer, Muhammad Qumar, Balas Valentina E., Lin Tsung-Chih, Balas Marius M., Asad Muhammad Usman, Raza Ali, Shehzad Muhammad Naeem, Farooq Umar, Gu Jason. *Derivative-Free Direct Search Optimization Method for Enhancing Performance of Analytical Design Approach-Based Digital Controller for Switching Regulator*. Energies. Volume 12, Issue 11, Article Number: 2183,

- 17 pag., Published: 1 June 2019, ISSN: 1996-1073, [WOS:000472635900150](#), DOI: 10.3390/en12112183, [IF₂₀₂₀ = 2.707, Q3](#).
- e11) Umair Tahir, Ghulam Abbas, Dan Ovidiu Glavan, Valentina E. Balas, Umar Farooq, Marius M. Balas, Ali Raza, Muhammad Usman Asad, Jason Gu. *Design of Three Phase Solid State Transformer Deployed within Multi-Stage Power Switching Converters*. Applied Sciences-Basel, Vol. 9, Issue 17, pp. 3544-3568. Published: 29 Aug. 2019. eISSN: 2076-3417, [WOS: 000488603600107](#), DOI: 10.3390/app9173545, [IF₂₀₂₁: 2.838, Q2](#).
- e12) Muhammad Usman Asad, Umar Farooq, Jason Gu, Valentina E Balas, Ghulam Abbas, Marius Balas, Vlad Muresan. *An enhanced state convergence architecture incorporating disturbance observer for bilateral teleoperation systems*. International Journal of Advanced Robotic Systems, Vol. 16, Issue 5, Article Nr: 1729881419880052, 9 pag., Published: 9 Sept. 2019, ISSN: 1729-8814, [WOS: 000491057400001](#), DOI: 10.1177/1729881419880052, [IF: 1.223, Q4](#).
- e13) Lin Yu-Chen, Balas Valentina Emilia, Balas Marius Mircea, Peng Jian-Zhang. *Adaptive backstepping nonsingular fast terminal sliding mode control for hydro-turbine governor design*. Energies. Vol. 13, Issue 1, Article Number: 126, 22 pag., Published: Jan. 2020, eISSN: 1996-1073, [WOS: 000520425800126](#), DOI: 10.3390/en13010126, [IF₂₀₂₁ = 3.252, Q3](#).
- e14) Lin Tsung-Chih, Li Cheng-You, Chen Pin-Fan, Chen Wei-Kai, Dey Rajeeb, Balas Marius M., Olariu Teodora, Wong Wai-Shing. *Identifier based intelligent blood glucose concentration regulation for type 1 diabetic patients: an adaptive fuzzy approach*. Journal of Intelligent & Fuzzy Systems. Vol. 38, no. 5, pp. 6175-6184, Published: 29 May 2020, ISSN: 1064-1246, eISSN: 1875-8967, [WOS:000541708200076](#), DOI: 10.3233/JIFS-179699, [IF₂₀₂₁ = 1.737, Q4](#).
- e15) Farooq Umar, Gu Jason, Asad Muhammad Usman, Abbas Ghulam, Hanif Athar, Balas Marius. *On line identification of nonlinear systems using neo-fuzzy supported brain emotional learning network*. Journal of Intelligent & Fuzzy Systems, Vol. 38, no. 5, pp. 6045-6051, Published: 29 May 2020, [WOS: 000541708200066](#), DOI: 10.3233/JIFS-179689, [IF₂₀₂₁ = 1.737 Q4](#).
- e16) Tayyaba Shahzadi, Ashraf Muhammad Waseem, Tariq Muhamamd Imran, Nazir, Mohsin, Afzulpurkar Nitin, Balas Marius M., Mihalache Sanda Florentina. *Skin insertion analysis of microneedle using ANSYS and fuzzy logic*. Journal of Intelligent & Fuzzy Systems. Vol. 38, no. 5, pp. 5885-5895, Published: 29 May 2020, ISSN: 1064-1246, eISSN: 1875-8967, [WOS:000541708200053](#), DOI: 10.3233/JIFS-179676, [IF₂₀₂₁ = 1.737, Q4](#).
- e17) Shahzadi Tayyaba, Muhammad Waseem Ashraf, Muhammad Imran Tariq, Maham Akhlaq, Valentina E. Balas, Ning Wang, Marius M. Balas. *Simulation, Analysis, and Characterization of Calcium-Doped ZnO Nanostructures for Dye-Sensitized Solar Cells*. Energies, Volume 13, Issue18, Article Number: 4863, 14 pag., Published: 17 Sept. 2020, eISSN: 1996-1073, [WOS:000580683100001](#), DOI: 10.3390/en13184863, [IF₂₀₂₀ = 3.252, Q3](#).
- e18) Muhammad Imran Tariq, Shakeel Ahmed, Nisar Ahmed Memon, Shahzadi Tayyaba, Muhammad Waseem Ashraf, Mohsin Nazir, Akhtar Hussain, Valentina E. Balas, Marius M. Balas. *Prioritization of information Security Controls through fuzzy AHP for cloud computing networks and wireless sensor*. Sensors, Volume 20, Issue 5, Article Number: 1310, 36 pag., Published: 28 Feb. 2020, eISSN: 1424-8220, [WOS:000525271500072](#), DOI: 10.3390/s20051310, [IF₂₀₂₀ = 3.847, Q1](#).
- e19) Venkatraman Yegnanarayanan; Narayanaa Y. Krithicaa; Balas E. Valentina; Balas M. Marius. *Alzheimer's Disease under the Purview of Graph Theory Centric Genetic Networks*. Brain-Broad Research in Artificial Intelligence and Neuroscience. Volume 12, Issue 2, pp. 178-201, DOI: 10.18662/brain/12.2/199, Published JUN 2021, Indexed 2021-09-02, [WOS:000688360400011](#), ISSN: 2067-3957. [IF₂₀₂₁ = 0.16, Q1](#).
- e20) Sabih Muhammad, Umer, Muhammad, Farooq Umar, Gu Jason, Balas Marius M., Asad Muhammad Usman, Qureshi Khurram Karim, Khan Irfan A., Abbas, Ghulam. *Image processing based fault classification in power systems with classical and intelligent techniques*. Journal of Fuzzy and Intelligent Systems, Volume 43, Issue 2, Special Issue SI, pp. 1921-1932, Published: 09 June 2022, ISSN: 1064-1246, [WOS:000811435100025](#), DOI: 10.3233/JIFS-219293, [IF₂₀₂₁ = 1.737 Q4](#).
- e21) Venkatraman Yegnanarayanan, Narayanaa Y. Krithicaa, Balas E. Valentina, Balas M. Marius. *Alzheimer's Disease under the Purview of Graph Theory Centric Genetic Networks*. Brain-Broad Research in

Artificial Intelligence and Neuroscience. Volume 12, Issue 2, pp. 178-201, Published: 19 July 2022, ISSN 2067-3957, [WOS:000688360400011](#), DOI: 10.18662/brain/12.2/199, [IF₂₀₂₁ = 0.160, Q4](#).

e22) Muhammad Usman Asad, Jason Gu, Umar Farooq, Valentina E. Balas, Marius M. Balas, Ghulam Abbas. *An Improved Composite State Convergence Scheme with Disturbance Compensation for Multilateral Teleoperation Systems*. Studies in Informatics and Control, Volume 31, no. 3, pp. 43-52, Published: Sept. 2022, ISSN: 1220-1766, eISSN: 1841-429X, [WOS:000863974500004](#), DOI: 10.24846/v31i3y202204, [IF₂₀₂₁ = 1.826 Q3](#).

e23) Mihaela Popa, Marius M. Balas, Ramona Lile, Valentina E. Balas. *The Three-tank Watergy Configuration*. International Journal of Computers Communications & Control, Vol. 19 No. 1, pp. 1-8, Feb. 2024. Articol 6418. [WOS: 001143126500003](#), DOI: <https://doi.org/10.15837/ijccc.2024.1.6418>, ISSN 1841-9836, [IF₂₀₂₃=2, Q3](#).

e24) Alexuta D, Balas VE, Balas MM, *On the Three-Tank Aquaponic Configuration*, International Journal of Computers Communications & Control. Vol. 20, issue 2, Article number: 7032, Published 01.03.2025. Online ISSN 1841-9844. [WOS:001455084900004](#), DOI: <https://doi.org/10.15837/ijccc.2025.2.7032>, [IF₂₀₂₄ = 1.9, Q3](#).

e25) Dana Rad, Csaba Kiss, Gavril Rad, Nicolae Paraschiv, Marius Bălaș. *A multilayer perceptron neural network prediction approach to polygraph scoring*. International Journal of Computers Communications & Control, Vol. 20, issue 2, Article Number: 7008, Published 01.03.2025. Online ISSN 1841-9844. [WOS:001455084900008](#), DOI: <https://doi.org/10.15837/ijccc.2025.2.7008>. [IF₂₀₂₄ = 1.9, Q3](#).

f) Articole de jurnal indexate BDI – Databases indexed journal papers

f1) M.M. Balas. *Financial Crisis and Technical Progress 2008-2017. The Parallel Shift in Information Technology*. In International Journal of Computational Systems Engineering, Inderscience, 2017. Vol. 3, Issue 4, pp. 213-219, ISSN: 2046-3391, eISSN: 2046-3405, DOI: 10.1504/IJCSYSE.2017.089194. [Indexed in: Academic OneFile \(Gale\), cnpLINKer \(CNPIEC\), Google Scholar, Info Trac \(Gale\), J-Gate](#).

f2) R.K. Sidharthan, R. Kannan, S. Srinivasan, M.M. Balas. *A Novel Keep Zero as Zero (KZZ) Polar Correlation Technique for Mobile Robot Localization using LIDAR*. Advances in Electrical and Computer Engineering, Issue 4, Vol. 16, 2016, pp. 15-22. Published: Dec. 2016, ISSN: 1582-7445, e-ISSN: 1844-7600, DOI:10.4316/AECE.2016.04003. [Scopus indexed](#).

f3) M. Balas, J. Nikolic, R. Lile, M. Popa, R. Beiu. *Intelligent Rooftop Greenhouses and Green Skyline Cities*. SWS Journal of Earth and Planetary Sciences, Vol.1, Issue 2, 10 Ian. 2019, pp. 15-28. ISSN: 2664 – 0090. DOI 10.35603/eps2019/issue2.02. [Indexată ORCID, Google Scholar, Dimensions](#).

g) Lucrări indexate ISI – ISI indexed proceedings

g1) R.E. Precup, S. Preitl, M.M. Balas, V.E. Balas. *Fuzzy controllers for tire slip control in anti-lock braking systems*. Proc. of Fuzz-IEEE'04 The IEEE International Conference on Fuzzy Systems, 25-29 July 2004, Budapest, Hungary, vol. 1-3, pp. 1317-1322. Published: 2004. IEEE Catalog Number 04CH37542, ISBN 0-7803-8353-2, ISSN 1098-7584, [WOS:000224959100228](#). [Conference paper. ISI indexed](#).

g2) M. Balas, C. Barna. *Using CCD Cameras for Car Following Algorithms*. Proc. of ISIE 2005 The IEEE International Symposium on Industrial Electronics, 20-23 June 2005, Dubrovnik, Croatia, ed. C. Peric, vol. 1-4, pp.57-62. Published: 2005. ISBN 0-7803-8738-4, [WOS:000235418900010](#). [Conference paper. ISI indexed](#).

g3) M.M. Balas, V. E. Balas, C. Barna. *The Constant Effort Imposed Distance Braking for Urban Railway Vehicles*. Proc. of EUROCON 2005 the International Conference on "Computer as a Tool", Belgrade, Serbia and Montenegro, 21-24 Nov. 2005, pp. 365-368. Published 2005. IEEE Catalog No: 05EX1255C, ISBN: 1-4244-0049-X, [WOS:000237248900093](#). [Conference paper. ISI indexed](#).

g4) M.M. Balas, V.E. Balas. *Some Observations on Stability of Switching Adaptive Rule Based of Fuzzy Self-Adapted Interpolative Controllers*. Proc. of ISCIII'07 3rd International Symposium on Computational Intelligence and Intelligent Informatics, 28-30 March 2007, Agadir, Morocco, pp. 63-66. Published: 2007. IEEE Catalog Number 07EX1756, Library of Congress 2007923135. ISBN: 978-1-4244-1157-3, [WOS:000247031600011](#). [Conference paper. ISI indexed](#).

- g5) V.E. Balas, M.M. Balas. *Switching Adaptive Correctors for Fuzzy Fusion Self-Adapted Interpolative Controllers*. Proc. of ISCIII'07 3rd International Symposium on Computational Intelligence and Intelligent Informatics, 28-30 March 2007, Agadir, Morocco, pp. 67-72. Published: 2007. IEEE Catalog Number 07EX1756, Library of Congress 2007923135. ISBN978-1-4244-1157-3, [WOS: 000247031600012](#). [Conference paper](#). [ISI indexed](#).
- g6) M.M. Balas, V.E. Balas. *World Knowledge for Control Applications*. Proc. of INES 2007 The 11th International Conference on Intelligent Engineering Systems, 29 June-1 July 2007, Budapest, Hungary, pp. 225-228. Published: 2007. IEEE Catalog Number 07EX1751, ISBN 1-4244-1147-5, Library of Congress 2007922965. ISBN: 978-1-4244-1147-4, [WOS:000250359600040](#). [Conference paper](#). [ISI indexed](#).
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- m21) M.M. Balas. *Systems Engineering and The Top-Down Approach*. International Conference of Computer Science and Renewable Energies (ICCSRE'20), Agadir, Maroc. 2020-12-22. [Keynote Speech](#).
- m22) M.M. Balas. *Integrated and Intelligent Rooftop Greenhouses* - St Albert's College, Kochi, Kerala, India. 2020-09-29. [Keynote Speech](#).
- m23) M.M. Balas. *Fuzzy-Interpolative Systems and Applications*. IEEE Hyderabad, India - A Webinar on Fuzzy Interpolative Systems and Applications. 2020-04-23. [Keynote Speech](#).
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- m26) M.M. Balas. *Systems Engineering: The Top-Down Approach*. 2nd Int. Conf. on Advancements in Interdisciplinary Research (ICAIR-2021). October 29 - 31, 2021, Agra, India. [Keynote Speech](#).
- m27) M.M. Balas. *Control surface based designing of control systems*. 8th World Conference on Soft Computing, Baku, Azerbaijan, 3-6 Feb., 2022. [Keynote Speech](#).
- m28) M.M. Balas, V.E. Balas. *Greenhouses as Intelligent Energetic Structures. Synergies*. AI2SD 2022 Advanced Intelligent Systems for Sustainable Development. Mohammed V University, ENSAM Rabat, Morocco, 22-27 May 2022. [Keynote Speech](#).
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- m31) M.M. Balas. *The Top-down Approach in Systems Engineering and Education (with Emphasis on Digital Electronics and Greenhouses Technology)*. Universidad de Talca, Curico, Chile, 24-28 Oct. 2022. [Keynote Speech](#).
- m32) M.M. Balas. *The Top-down Approach in Systems Engineering and Education*. SOFA 2022 10th International Workshop on Soft Computing Applications, Arad, 21-23 Nov. 2022. [Keynote Speech](#).
- m33) M.M. Balas. *The Intelligent Rooftop Greenhouse as IoT subject*. 6th Conference on Cloud and Internet of Things CIoT23, Lisabon, Portugal, March 20, 2023. [Keynote Speech](#).
- m34) M.M. Balas. *Space and Time in Traffic Control*. Scientific workshop devoted to professor Lotfi Zadeh's scientific heritage, Baku, Azerbaijan, March 28, 2023. [Keynote Speech](#).
- m35) M.M. Balas. *The Top-down Approach in Systems Engineering and in ... Everything*. 5th International Conference on Data & Information Sciences (ICDIS-2023), Raja Balwant Singh Engineering Technical Campus, Bichpuri, Agra, Uttar Pradesh, India, June 16, 2023. [Keynote Speech](#).
- m36) M.M. Balas. *Assesing the Carbon Offset*. International Conference on Artificial Inteligence applied in the field of Space Lauching Systems, Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Power Energy SLS&OPTIROB 2023, Jupiter, 28 June 2023. [Keynote Speech](#).
- m37) M.M. Balas. *Hybrid Controllers*. 20th International Bhurban Conefrence on Applied Sciences & Technology, Bhurban, Pakistan, August 22, 2023. [Keynote Speech](#).
- m38) M.M. Balas. *A Systems Engineering Subject: The Rooftop Greenhouses. Objectives, Models, Control*. 20th International Bhurban Conefrence on Applied Sciences & Technology, Bhurban, Pakistan, August 23, 2023. [Keynote Speech](#).
- m39) M.M. Balas. *How can Time Measure Distances*. 5th International Conference on Data and Information Sciences (ICDIS-2023). Agartala College, Tripura, India, Sept. 07, 2023. [Keynote Speech](#).
- m40) M.M. Balas. *The Intelligent Rooftop Greenhouse and IoT*. International Workshop on Emerging Trends in Electrical Engineering. Prasad V. Potluri Siddhartha Institute of Technology, JNTU Kakinada, India, Dec. 20, 2023. [Keynote Speech](#).
- m41) Marius M. Bălaș. *Increasing Carbon Offset by Rooftop Greenhouses*. 7th International Conference on Mathematical Modelling, Applied Analysis and Computation, (ICMMAAC-24) Lebanese American University, Beirut, Lebanon, 18-20 April 2024. [Keynote Speech](#).
- m42) Marius M. Bălaș, *Moore's Laws and the Higher Education*, The 9th World Conference on Soft Computing, Baku, Azerbaijan, 25-28 Sept. 2024. [Keynote Speech](#).
- m43) Marius M. Bălaș, *On the Stability of the Switching Controllers Systems*. The 7-th edition of the International Conference on Space Launching Systems SLS 2024 and 19-th edition of the International Conference on Artificial Intelligence applied in the fields of Aerospace, Astronautics, Robotics, Mechanical Engineering, Manufacturing Systems, Technology of Materials, Power Energy and Neurorehabilitation- OPTIROB 2024, Jupiter 27 iunie – 1 iulie, 2024. [Keynote Speech](#).
- m44) Marius M. Bălaș, conferință în plen, *The Moore's Laws for Knowledge and Education*, 2024 National Youth Academic Conference on Industrial Design in conjunction with the 1st Conference on Innovation Design and Intelligent Manufacturing Engineering, as well as 2024 International Symposium on Design Studies and Intelligence Engineering (DSIE2024), Hangzhou, China, 18-23 Dec. 2024. [Keynote Speech](#).
- m45) Marius M. Balas, *The Moore's Law for Education and The Need For Inclusion*, International Multiconference Information Society, IS 2024, Ljubljana, Slovenia, 7–11 Oct. 2024. [Prezentare neplănată](#).
- m46) M.M. Balas. *The Parallel Shift in Signal Processing*. CrossRoads of AI and Signal Processing. Dwarkadas J. Sanghvi College of Engineering, Mumbai, 27 Ian. 2025. [www.djsce.ac.in](#). [Keynote Speech](#).
- m47) M.M. Balas. *Watergy - the common management of water and energy*. Innovative Computing & Communication in The Field of Life Sciences, Agriculture and Technology. Chaudhary Charan Singh

University, Meerut U.P. India, 7-9 Feb. 2025. <https://ccsu-scriet.github.io/international-conference/>. **Key-note Speech.**

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m49) M.M. Balas. *The Millenary Rail-way Transportation's Lifecycle as Witnessed in Arad and Its Surroundings*. Conferința științifică de primăvară a AOSR, 2025 București, Știința și diplomația culturală – factori ai cooperării internaționale. 23 – 24 mai 2025. **Prezentare plenară.**

m50) M.M. Balas. *Automation of the Two-Second Rule via Constant Time-to-Collision Curves*. Conferința științifică de toamnă a AOSR, 2025 Durău, Știință, Cunoaștere, Creativitate, Spiritualitate, 17 - 19 sept. 2025. **Prezentare plenară.**

m51) Marius M. Balas, Dana V. Rad, Gavril Rad, Mihaela Popa, Daniel Alexuta. *Greenhouses as Synergistic Components of Hybrid Systems*. SGEM Vienna GREEN 2025 Green Sciences for Green Life Extended Scientific Sessions of the XXVth SGEM Earth & Planetary Sciences Conference 2025. 6.12.2025. **Prezentare neplenară.**

m52) Charlotte Mukashyaka, Marius M. Balas, Gaspard Gashema, Thompson Faraday Ediagbonya. *Internet Of Things in Poultry Farming: A Comprehensive Review of Technologies, Applications and Future Prospects for Climate-Resilient Livestock Systems in Africa*. SGEM Vienna GREEN 2025 Green Sciences for Green Life Extended Scientific Sessions of the XXVth SGEM Earth & Planetary Sciences Conference 2025. 6.12.2025. **Prezentare neplenară.**

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